Modifications and Enhancements to ENPEP for Windows Versions 2.10 to 2.15g

Model Corrections Related to Database and File Management:

❑ Corrected a problem with importing cases from older model versions. In some situations, the model reported an error about creating some views. Even though this did not affect the analysis or the ability to run the cases, we fixed this to avoid the error messages.

❑ Corrected a problem with creating a new study. In some situations, the model reported an error about an unrecognized database version. Again, this did not affect the analysis or the ability to open the database or run the cases. But we fixed it to avoid the error message.

❑ Similarly, we corrected an error message about incompatibility of the database.

Model Corrections Related to Interface:

❑ Corrected a problem with displaying results on stock piles. The model would not display negative flows, that is, flows of energy into the stockpile. In the past, the user was able to work around this by looking at the link report for the link connecting the stockpile to the allocation node. This would show the annual negative flows. However, to allow the user to view the accumulation of stocks (negative flows) in the stockpile, we corrected this problem.

❑ Corrected a problem with displaying market shares at allocation nodes. If the user selected a currency unit under Edit - Run Parameters – Non-electric Units other than the default unit, the market share was not displayed correctly. We modified the code to fix this.

❑ Corrected a problem with special events, that is, when any of the input data gets manually modified by the user in subsequent years. Here is an example for a special event: if the lifetime of a process is 15 years in the base year and you want to change this value to 25 years in the fifth year of the study period. There was a problem with some fields where if you changed your mind and deleted the 25 in the fifth year, the model would assume 0 starting in year 5, instead of continuing to use the base year value of 15. We corrected this as this affected the model results.

❑ Corrected a problem with the display of run parameters.

❑ Corrected a problem with the display of electrical units

❑ Price sensitivity on allocation nodes can now be less than 1.0 (between 0 and 15)

Model Corrections Related to Calculations:

- Corrected a problem with calculating the salvage value in NPV routine for units that are on line in the base year or before (salvage value is set to zero now)
- Corrected a problem with calculating the capital costs and salvage value in NPV routine

Additional Features:

- Added an automatic check for network modifications. If the user modifies the network structure (add or delete nodes or links), the model now alerts the user to run the updown under File – Run Updown Pass Sequencer before running the case.
- Added a version control feature for older case export files (*.cas) to improve the import routine.
- Defined valid data ranges for all input variables and added data validation checks for all input fields.
- Added a summation feature to the allocation node input screen for base year output splits. The new feature sums up all base year splits and alerts the user if the sum is not equal to 1.0.
- Added market share calculation and display to allocation node reports and graphs.
- Added a routine to compute system economic costs. The routine is located in the RUN subfolder. The routine computes the net present value (NPV) of all economic costs. The NPV routine still needs to be executed outside the model by going to the C:\Program Files\Enpepwin\BALANCE\RUN subfolder, and typing COST. This will run a new batch file (cost.bat) that executes the NPV calculations and creates a report file called NPV.out. You can import the file into EXCEL as semicolon-delimited, sum up the NPV column (column L) and obtain the total economic system cost for the case. The NPV routine will be fully integrated into the model in Version 2.20.
- Included discrate.dat file in the installation. Discrate.dat installs in the \balance\run directory and includes the discount rate used in the NPV calculations as well as the cost of energy not served. Default settings are 0.1 for discount rate and 0 for energy not served (ENS). If you want to use a different discount rate or cost of ENS, open the file in a text editor and change the values
- Added an About Balance feature under Help. This feature identifies the exact version you are running on your computer. If you report a problem, we may ask you to tell us your exact version number. You can use this feature to find this information.
- Added five additional user-defined units to all unit types in the Edit – Run Parameters – Electric/Non-Electric Units screen. If the pre-defined list of available input/output units does not include the unit of your choice, you can utilize these entries to define the unit you want to use.

A variety of additional features will be available in the upcoming ENPEPWin Version 2.20 scheduled for release in fall 2001.